

## CLAIMS

1. A system (23) that maintains synchronization between a video signal (29) and an audio signal (31) that are processed using clocks that are locked, the  
5 system (23) comprising:  
a component (34) that determines at least one initial level of a buffer;  
a component (34) that determines at least one current level of the buffer;  
and  
a component (34) that determines an amount of drift by comparing the at  
10 least one initial level of the buffer to the at least one current level of the buffer  
and adjusts the clocks to maintain the initial midpoint level of the buffer if the  
amount of drift reaches a threshold level.
2. The system (23) set forth in claim 1, wherein the at least one initial level  
15 of the buffer comprises an initial midpoint level (Init Mid).
3. The system (23) set forth in claim 1, wherein the at least one initial level  
of the buffer comprises an initial minimum operating level (Init Min), an initial  
maximum operating level (Init Max), and an initial midpoint level (Init Mid).  
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4. The system (23) set forth in claim 3, wherein the initial midpoint level (Init  
Mid) is computed according to the following formula:  
initial midpoint level (Init Mid) = (initial maximum operating level (Init Max) +  
initial minimum operating level (Init Min))/2.  
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5. The system (23) set forth in claim 1, wherein the at least one current level  
of the buffer comprises a current midpoint level (Cur Mid).
6. The system (23) set forth in claim 3, wherein the at least one current level  
30 of the buffer comprises a current minimum operating level (Cur Min), a current  
maximum operating level (Cur Max), and a current midpoint level (Cur Mid).
7. The system (23) set forth in claim 6, wherein the current midpoint level  
(Cur Mid) is calculated according to the following formula:  
35 Operating Midpoint = current midpoint level (Cur Mid) = current minimum  
operating level (Cur Min) + initial midpoint level (Init Mid) - initial minimum  
operating level (Init Min).

8. The system (23) set forth in claim 1, wherein the audio signal (31) and the video signal (29) comprise a Motion Picture Experts Group (MPEG) signal.

9. The system (23) set forth in claim 1, wherein the system (23) comprises a portion of a television set.

10. The system (23) set forth in claim 9, wherein the television set comprises a High Definition Television (HDTV) set.

11. A system (23) that maintains synchronization between a video signal (29) and an audio signal (31) that are processed using clocks that are locked, the system (23) comprising:

means (34) for determining at least one initial level of a buffer;

means (34) for determining at least one current level of the buffer;

means (34) for determining an amount of drift by comparing the at least one initial level of the buffer to the at least one current level of the buffer; and

means (34) for adjusting the clocks to maintain the initial midpoint level of the buffer if the amount of drift reaches a threshold level.

12. The system (23) set forth in claim 11, wherein the at least one initial level of the buffer comprises an initial midpoint level (Init Mid).

13. The system (23) set forth in claim 11, wherein the at least one initial level of the buffer comprises an initial minimum operating level (Init Min), an initial maximum operating level (Init Max), and an initial midpoint level (Init Mid).

14. The system (23) set forth in claim 13, wherein the initial midpoint level (Init Mid) is computed according to the following formula:

initial midpoint level (Init Mid) = (initial maximum operating level (Init Max) + initial minimum operating level (Init Min))/2.

15. The system (23) set forth in claim 13, wherein the at least one current level of the buffer comprises a current midpoint level (Cur Mid).

16. The system (23) set forth in claim 13, wherein the at least one current level of the buffer comprises a current minimum operating level (Cur Min), a current maximum operating level (Cur Max), and a current midpoint level (Cur Mid).

17. The system (23) set forth in claim 16, wherein the current midpoint level (Cur Mid) is calculated according to the following formula:

Operating Midpoint = current midpoint level (Cur Mid) = current minimum  
5 operating level (Cur Min) + initial midpoint level (Init Mid) - initial minimum  
operating level (Init Min).

18. A method (400) of maintaining synchronization between a video signal (29) and an audio signal (31) that are processed using clocks that are locked, the  
10 method (400) comprising:

determining (404) at least one initial level of a buffer;

determining (405) at least one current level of the buffer; and

determining (406) an amount of drift by comparing the at least one initial  
level of the buffer to the at least one current level of the buffer; and

15 adjusting (410) the clocks to maintain the initial midpoint level of the  
buffer if the amount of drift reaches a threshold level.

19. The method (400) set forth in claim 18, comprising:

defining the at least one initial level of the buffer to comprise an initial  
20 minimum operating level (Init Min), an initial maximum operating level (Init Max),  
and an initial midpoint level (Init Mid); and

computing the initial midpoint level (Init Mid) according to the following  
formula: initial midpoint level (Init Mid) = (initial maximum operating level (Init  
Max) + initial minimum operating level (Init Min))/2.

20. The method (400) set forth in claim 19, comprising:

defining the at least one current level of the buffer to comprise a current  
minimum operating level (Cur Min), a current maximum operating level (Cur Max),  
and a current midpoint level (Cur Mid); and

30 computing the current midpoint level (Cur Mid) according to the following  
formula: Operating Midpoint = current midpoint level (Cur Mid) = current  
minimum operating level (Cur Min) + initial midpoint level (Init Mid) - initial  
minimum operating level (Init Min).